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XXI.—*Account of the recent exploring Expedition to the Interior of Australia.* By Major T. L. MITCHELL, F.G.S., and M.R.G.S., Surveyor-General of New South Wales.

HAVING recently returned to England on leave of absence, after a residence of ten years in New South Wales, during which period I have surveyed that colony, and led three expeditions into parts previously unknown; I have much pleasure in submitting to the Royal Geographical Society the following brief account of these journeys, prefacing the narrative by a few observations on what had previously been done in exploring the interior, by my predecessor in office, and others.

In 1818, during a rainy season, Mr. Oxley, the late Surveyor-General, traced the course of the Macquarie to an inundation which he considered an inland sea. In 1829 (a dry season), Captain Sturt, pursuing Oxley's route, penetrated about a hundred miles farther, and was twice compelled to retire from the banks of a river of salt water, because no fresh water could be found.

In another direction, Mr. Oxley had, in 1817 (also a wet season), traced the river Lachlan, to an inundation similar to that which terminated his survey of the Macquarie; and he thereupon concluded that the whole country beyond was a marsh and uninhabitable. But, in 1824, the journey of Messrs. Hovell and Hume led to a more favourable conclusion, respecting the southern portion, at least, by the discovery of several large rivers, whose courses appeared to concentrate on the Murrumbidgee,—a river flowing nearly in the direction of that point to which Mr. Oxley had traced the Lachlan. In 1830, Captain Sturt embarked in a boat on the waters of the Murrumbidgee, which led him accordingly to the great channel of the streams which had been crossed by Hovell and Hume; and, by descending this large river, which had been named the Hume by Mr. Hume, and the Murray by Captain Sturt, he discovered its estuary in Encounter Bay. The Murray received a river from the north, supposed to be the Darling, but its waters were fresh and the identity remained a question.

Such was the state of Australian geography when General Darling left New South Wales in 1831. During the temporary government of Sir Patrick Lindesay another step was gained. A bushranger having been sentenced to suffer death for cattle-stealing, and who had been so long associated with the aborigines that he had acquired a knowledge of their language and means of subsistence, had related so plausible a tale respecting a very large river which he had followed in a north-western direction from Liverpool Plains to the sea coast, that the acting Governor was induced to despatch an expedition, under my command, to

examine the country on that side. The report drew more attention, at that time, as the course ascribed to the river Peel by Oxley and Cunningham, was quite at variance both with recent surveys and this man's description of it. The result of the journey was the discovery of the Karaula, or Darling, as a *fresh-water* river, in the latitude of  $29^{\circ}$ ; and that its basin comprehended all the streams falling westward from the coast-range, as far north as that parallel; and that one of these, the Peel, flowed westward, and not northward, as supposed by Oxley and Cunningham. Limited as that excursion was by the unfortunate murder of two men and seizure of provisions by the aborigines, it afforded the means of demonstrating the advantages of angular measurement, and of devoting particular attention to the highest points of the country.\*

The remarks on that journey, which appeared in the second volume of this Journal, may be best understood by comparing the course ascribed therein to the Peel, with that since laid down from actual survey. The looser maps of early travellers, so far from being a test of accuracy, are uncommonly erroneous in that spot; and the *names* first given, if doubtful in their application, for *that* reason, are of no consequence whatever, as they only lead, in such cases, to confusion.†

Captain Sturt undertook the survey of the interior by following up Mr. Oxley's discoveries, and tables of the number of miles explored by each traveller have been published on maps in England; but the officers of the surveying department had been extending across the country, from the Observatory at Paramatta, those more systematic operations which have left but few traces of such early journeys on the maps.

On leaving Sydney for the northern interior, I left in the hands of the engraver a trigonometrical map of the colony. Its wildest regions, which had been previously considered inaccessible, had not only been explored on the principles which I have since applied to the exploration of the interior, but they had also been surveyed, intersected by roads, planted with villages, and divided into counties, according to the boldest natural divisions, and yet of given extent. I could at length overlook the interior from a base of

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\* It is due to the memory of a very enterprising and talented officer, the late Captain Forbes, of the mounted police, that I should mention here his subsequent excursion to the banks of the Gwydir, accompanied by Lieutenants Maule and Finch. Captain Forbes traced the Gwydir to its sources near Mount Lindesay, and obtained much information respecting aboriginal names of localities, which he sent to me from India, and shall appear in my forthcoming map of these discoveries.

† The river to which Mr. Oxley gave the name of "Peel" could not be mistaken by me, as alleged in that paper, because it has, ever since Oxley's journey, been known by that name to the stockmen; and there is no other like it to the eastward.

"Communemque prius, seu lumine solis, et auras,  
Cautus humum longo signavit limite mensor."

ranges, which had been traced through all their ramifications, and the satisfaction with which I then beheld the country behind these ranges reconciled me to the disappointment I had experienced in my early views of exploring the desert regions beyond them.

After that journey, in 1831, it was obvious that all the ranges to the southward of  $29^{\circ}$  S., with one exception only, terminated either on the interior plains, or were limited by the known courses of rivers. The only ridge south of  $29^{\circ}$  which could possibly prove continuous westward was that between the Macquarie and the Lachlan, and on the solution of this question depended the course of the Darling; for if the range had proved continuous the river must have turned, as many then thought it would, towards the north-western coast. The divergent courses of the Macquarie and Lachlan gave some weight to the opinion that they belonged to different basins, especially as they were separated by what Mr. Oxley termed "a very elevated range," which was seen by him extending westward, at a distance of seventy-two miles. Towards the head of this feature, on the east of Oxley's route, the mountain mass of the Canobolas, projecting westward so much farther than other branches from the coast-range, and its greater elevation (since ascertained by me to be 4461 feet above the sea), were facts in favour of such an hypothesis. In proceeding to explore, in 1835, the course of the Darling, by order of the British government, I availed myself of this range, as far as my instructions permitted; and thus I avoided the marshes of the Macquarie, and reached the farthest point previously attained on the Darling, without crossing a single stream.\*

The chief discoveries of this journey were—

1st. The course of the Darling, which was surveyed for 300 miles (in direct distance) beyond the farthest point previously reached.

2nd. That the country beyond this river was intersected by ranges, the interior plains being ascertained to be of no great extent.

3rd. That Duck Creek is a principal channel by which the waters of the Macquarie reach the Darling.

4th. The whole course of the river Bogan, "Allan's Water" of Oxley; which was connected with "New Year's Creek" of Sturt, by tracing this river fully 300 miles. This was a line of considerable importance, as affording the means of access to the

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\* For an account of this journey, from the pen of the traveller who had preceded me, see "The Times" of 25th February, 1836, in which an error of nearly a degree of longitude is accounted for by the greater altitude of the sun in summer! In exploring, great accuracy could not be expected, but the remarks contained in that advertisement evince but little sympathy for a brother-traveller. The statements respecting the natives and the number of the party are incorrect. The positions and movements of the little party on the Darling required as much care as those of a *corps d'armée*. The extreme anxiety of its leader to conciliate the natives and avoid collisions, when at the same time occupied in surveying and drawing, can scarcely be imagined or understood by any who have not been in similar situations.

river Darling at all times ; the chief impediments to travelling in Australia being the want of water in dry seasons, and too much of it during seasons of rain. Water is always to be found, at least in ponds, in the Bogan, and no floods can reach the rising grounds over the left bank of that river.

The death of the lamented Mr. Richard Cunningham, by the hands of the natives, deprived science of those discoveries which might have been expected from so able a botanist ; nevertheless, the specimens brought from the Darling comprise some of a new and highly interesting character, and will be fully described in notes to my journal of these travels, by an eminent botanist.

The singular conduct and character of the aboriginal inhabitants (whose hostility at the termination of the journey had compelled the party, during my absence, to fire upon them in their own defence) exhibit human nature in some new and striking points of view, as will appear in the graphic illustrations which I am preparing for publication.

The grand object of that journey, however, was not accomplished ; and on the following year a second expedition to the Darling was considered necessary to complete the exploration of its course.

In 1836 I accordingly again proceeded into the interior, when three years of drought had dried up not only every pool, but even the river Lachlan ; which line, however, under such circumstances, I was compelled to follow, in order to accomplish the objects of that expedition : these were not confined to the Darling ; my attention was also directed to the course of the Murray upwards, and the unknown country beyond it. Compelled to deal with the elements as we found them, I traced, although with great difficulty, from want of water, the Lachlan's channel to the Murrumbidgee, and the Murrumbidgee into the Murray. Establishing a depôt near the junction of the last two rivers for the repose and refreshment of the exhausted cattle, and leaving Mr. Stapylton and a party in charge of it, I continued my survey along the river Murray down to the junction of the river Darling, and this river upwards until I identified it with that from which the party had retired on the former year.

When absent from our depôt, the rain set in, the Murray rose, and when we were entangled in its rising back-waters, which formed large lakes, the same tribe of savages who had attacked the men on the Darling, now, in greatly increased numbers, surrounded this small party on the Murray. The measures of defence adopted under these circumstances were, fortunately for the lives of the party, successful, although they involved the painful necessity of firing upon the hostile natives.

On regaining the depôt on the Murray, which could only be

accomplished by swimming the horses over several deep reaches of the flooded river, the whole party crossed this large stream, the breadth of which was here 110 yards only, the current being very rapid. Exploring its course upwards, by proceeding along the left bank, we found that the outer banks, or *bergs*,\* receded to a great distance from the river, the intervening *margins*† presenting a vast expanse, covered with reeds, which in some directions extended to the horizon. The ground on which these reeds grew was, however, firm, and the river did not lose its channel, although the reedy space was, in some parts, intersected by winding or serpentine reaches of still water. On arriving at a large lake named "Boga," in lat.  $35^{\circ} 26'$  S., long.  $143^{\circ} 45'$  E., the party found that the reedy expanse was contracted by grassy semicircular ridges, which formed the eastern side of remarkable circular basins or lakes, in most of which the water was salt, or brackish. The course of the main stream was again marked by trees, and, back from the river, towards the west, the country assumed a more favourable aspect, while to the southward and eastward of "Boga" it wore a park-like appearance, presenting extensive flats, covered with rich verdure, and watered by lagoons shaded by lofty trees.

At length, in long.  $144^{\circ} 20'$  E. the party were once more gratified with the hopeful sight of mountains; the dead reaches debarred all access to the living stream, and I eagerly turned toward the south-west, to enter a perfectly unknown region. After surmounting the barriers of parched deserts and hostile barbarians, I had at length the satisfaction of overlooking from a pyramid of granite a much better country. The hill which I ascended, and named Mount Hope, was the most western extremity of a granitic range, extending from the south-east. A beautifully broken horizon in the south bounded plains which were then quite green, and gracefully wooded. It was no longer my hopeless task, as on the banks of the Darling, "to describe stagnation and delineate vacancy." Here, the party traversed a finely-variegated country, well watered, not only by streams from the south-east, but also by others from a lofty central mass which I named the Grampians of the South. These mountains appeared to water the country around them, without obstructing a free communication through it. The rain continuing, the soft rich earth materially impeded the progress of the drays through this fine region. The stock of provisions was reduced to a small quantity, while the progress of the party was, on some days, limited to one or two miles. When within forty

\* + I here adopt the very useful terms recommended by Colonel Jackson, in his sensible paper on "Geographical Arrangement and Nomenclature," in the fourth volume of the Journal of the Royal Geographical Society.

miles of the highest summit of the Grampians I rode forward to it, leaving the animals to rest. Ascending, I distinguished it with the name of the Sovereign in whose reign that region which it overlooked had been explored. On this summit I passed a night, vainly hoping that the clouds would leave it. The thermometer stood at  $27^{\circ}$ , and having but little to eat, two of the four men accompanying me were taken ill, and only got down with much difficulty. At sunrise the clouds left this summit for a short time, and unveiled a scene of amazing grandeur, but by no means favourable for the operations of a surveyor. A sheet of clouds covered sea and land, with the exception of a few peaks.

The Wimmera, a river remarkable from flowing in several deep and continuous channels, rises on the north-eastern side of these Grampians, and after receiving various small tributaries in its course westward, to near Mount Howick, it then suddenly assumes a north-western course, which it was pursuing when abandoned by the party in longitude  $142^{\circ}$  E. The Glenelg receives all the waters falling south and south-west from the Grampians, and falls into the Southern Ocean in the deepest part of the curve between Cape Northumberland and Cape Bridgewater. Leaving the cattle to rest, in charge of a party under Mr Stapylton, and embarking with the rest of the men on this river, I reached the estuary in the boats, and was much disappointed to find it but a shallow outlet, the river for many miles having promised something better, by maintaining an uniform breadth of 100 yards, and an average depth of four fathoms.

As the party returned towards the southern skirts of the Grampians, I visited Portland Bay, where I found several whaling parties, and also an establishment on shore, where I had the good fortune to obtain, from Messrs. Henty and Co., a small supply of flour.

The country between the Grampians and the coast is chiefly of the trap formation. Extensive downs occur, which are covered with *danthonia*—the best kind of grass. Amygdaloidal rocks appear in hollows on these plains; and, further to the eastward, the party traversed a region of the most fascinating character, where the hills were smooth, verdant, and nearly all of a mameloid form, the rock composing them consisting wholly of lava. Mount Napier, situated between the Grampians and Portland Bay, contains a crater—the first hitherto discovered in Australia, and is surrounded for several miles by a rock which appears to be an ancient lava.

The Grampians of the south are situated between the latitudes of  $36^{\circ} 52'$ , and  $37^{\circ} 38'$  N., and between the longitude of  $142^{\circ} 25'$ , and  $142^{\circ} 47'$  E.; the latter being the longitude of Mount William, which is the highest and most eastern summit, being elevated

4500 feet above the sea. The other hills were so favourably situated for surveying the whole country, that I found no difficulty in carrying a chain of triangles along their summits from Portland Bay homewards, or in picking the way before me for the passage of drays through gaps in ranges, sometimes fifty miles a-head of the party, and from such summits tracing the general courses of the various rivers crossed by it. A range of grassy hills between the Grampians and the Alps I named the Australian Pyrenees—distinguishing the principal fixed summits with the names of Cole, Byng, Campbell, &c.

From Mount Macedon I reconnoitred Port Phillip at the distance of sixty miles\*. In this region the party crossed ranges of granite, others of trap rock, the woods forming open forests which only partially covered the country. This, even in its present state, seems nearly all available for the purposes of agriculture and grazing; and being almost without any aboriginal inhabitants, it is consequently in the best state for the reception of British emigrants.

In point of latitude this extreme southern angle of Australia is preferable to any other portion, supposing other advantages equal. But the snowy mountains here temper the climate still more, and support throughout the summer the large rivers to which they give birth. The sea on three sides throws up clouds of moisture, and the general appearance of the country, duly considering these circumstances, induced me to distinguish this region by the name of “Australia Felix;” that is to say, the whole country situate to the southward of the river Murray.

I was anxious to have ascertained what harbours the coast afforded, but the difficulties we encountered in conducting the boats and heavy wheel-carriages over a country without roads, and during a very rainy season, allowed no time for the excursions which I meditated towards different parts of the coast, and especially to that portion between Cape Bernouilli and Cape Northumberland, which appeared to me to be the most promising, but which has never been well examined. Towards Cape Otway, also, I perceived, from the mountains, an extensive sheet of water, named “Cadong” by the natives.

The draught-oxen having become quite exhausted by the time they reached the southern extremity of the Grampians, I left Mr. Stapylton there, in charge of the bulk of the equipment and cattle, at a spot named Lake Repose, where they were to refresh during two weeks; while I, with a lighter party, explored the route homewards, and was thus enabled to send back to Mr.

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\* This hill has since been visited from Port Phillip, by the Governor in person, when my observations were verified by Capt. P. P. King, R.N., who accompanied his Excellency.



Stapylton a supply of provisions, which met this surveyor, as arranged, on the banks of the Murray.

Across all these mountain-ranges and rivers the boat carriage and the principal boat, both of which had been used on two expeditions, were carried safe back to Sydney. On this last occasion no lives had been sacrificed to the natives. On the contrary, six of the aborigines, male and female, had accompanied the party throughout the journey, and contributed most essentially to its safety and success. The whole distance, amounting to upwards of 2400 miles, was measured with the chain, and this measurement was connected with angular surveys, and observed latitudes, as much as circumstances permitted.

The general results of these three expeditions, however insignificant they may appear, compared to what the exploration of Australia on the same principles might have produced, are nevertheless sufficient to prove that the interior of the country is very accessible, and can be most easily explored by tracing the lines of high land.

The journeys hitherto undertaken, in order to follow out the courses of rivers, have led the travellers to those low levels which, in rainy seasons, have suggested the ideas of inland seas, and, at drier seasons, have been found still less accessible from the great scarcity of water, the level surface presenting no inequalities fit to contain much, still less heights to retain or condense vapour; but where, on the contrary, all the moisture is exposed to the evaporating power of extremely hot winds. The higher grounds are not subject to so many disadvantages, while the survey of them may be attended with more certain and satisfactory results. In wet seasons, chains of heights present the only accessible lines; almost every valley or ravine then contains water, while summits are secure from inundation. In dry seasons, on the contrary, the traveller may seek with some confidence among such elevations, so favourable to the condensation of moist clouds, for the springs which form the sources of streams; water being less exposed in the rocky bosoms of the hills to the effects of evaporation and absorption. By tracing the connexion of any high ground, the sources of the streams on each side thereof are ascertained, so that when such limits of their basins have been defined, any one may know where to look for the rivers arising therein; and, with a knowledge of the elevation, extent, and quality of the sources of rivers, we might appreciate their magnitude and the value of their deposits.

By proceeding in any *given* direction, besides the disadvantages attending both the want and the superabundance of water, at most seasons insurmountable, in the Australian interior, the geographical information obtained by such a course cannot be, at best, but

very imperfect. For whereas the course of a river, or the direction of a range, once ascertained and marked in its true place in the world's map, is an acquisition, one sure step gained towards a thorough knowledge of all the earth's features: from a line of route, on the contrary, which only crosses any number of streams and ranges at one or two points, no such permanent advantage is derived, but erroneous conclusions as to the course and identity of streams, or the direction of ranges crossed, are too frequently the only results. The knowledge thus obtained amounts to little more, indeed, than the fact—which might, without much hesitation, be assumed, respecting any extensive region not quite a desert—namely, that it *is* intersected by streams and ranges, *whose sources and direction are unknown*.

By tracing out the different ranges which branch into the interior from the eastern coast range, and thus either discovering what high land unites the hills of Eastern and Western Australia, and divides the waters falling north and south, or the non-existence of any such high land, we should in either case break up the blank map thereof. All other questions seem subordinate to this, as the extent of the basins of any rivers on either side would be determined. Inland lakes or seas, if such were found, might be gained thus by the most permanent lines of access, while the steps of the traveller would in any case mark out features of primary geographical importance. To insist further on the advantage of carrying an exploratory survey along chains of hills which command distant prospects of the country, and afford the means of angular measurement, when time and means permit, rather than over low plains and through woods, may seem as superfluous as it would be to recommend daylight for a survey rather than darkness; nevertheless, to trace rivers over plains subject to inundation, rather than to explore the more accessible limits of their basins, has been chiefly the practice in exploring Australia, and hence it is that the geography of that large portion of the earth's surface is still involved in obscurity.

The principle of tracing ranges, herein recommended, has been successfully applied to the survey of all the wild and unexplored districts of New South Wales, and its practical utility demonstrated in a map of that colony, engraved in Sydney, and sent by me to the Geographical Society in 1834. A country less favourable for such operations can scarcely be imagined. Intersected by ravines, accessible only to the eagle, the horizon, nevertheless, presents but few points, these being covered with wood. By ascertaining from such stations the direction of ranges connected with them, I was enabled to direct the progress of the surveyors, and thus to measure the basins of streams, whose courses also have been surveyed through valleys which are, even

now, inaccessible to the colonists. Thus, the western sources of the Wollondilly, the northern and western tributaries of the Hawkesbury, the Macdonald, the Colo, and the courses of many other streams, could only be ascertained by tracing the ranges which enclosed them; and such parts of the map as had been until then as blank as that of the interior were thus broken up by the insertion of the principal features of the country. In this case the process which would still be necessary for the survey of a country, after a general knowledge of its features had been obtained, has afforded the best means of acquiring that knowledge; and, in the same manner, by the mere extension of these operations, all Australia may be explored.

In the official account of my journey, in 1831, I stated that the whole country "along the banks of the Karaula, the Gwydir, and Nammoy, bears marks of frequent inundation." The idea of limits seems inseparable from that of inundation, and the rising floods of the Macquarie and Lachlan should have suggested that such rapidly rising waters *had* limits not very remote, rather than that they belonged to a sea of any extent.

We know now that all the waters on the interior side of the coast-range south of 29° are received into one basin, which is subject to occasional inundations, and we know the limits of this basin on one side. The next question naturally arising, is, Where are those limits on the other side? We know that the waters rise suddenly to a considerable height, and we may, therefore, safely conclude, that the width of this basin is not extensive, consequently that some high land bounds it to the north-west. Such an assumption is nevertheless termed "gratuitous" in the remarks on my dispatch, published in the second volume of the *Journal of the Geographical Society*.

Reverting to the principles which have guided me, as before stated, in my surveys both of the colony and the interior, it may be observed, that although geographical information may not be considered too dear at any price, still, that when lives are to be risked, and all the comforts of civilized life left behind, in order to obtain it, the very best use ought to be made of such knowledge as we already do possess. In illustration of these remarks it may be added, that neither Mr. Oxley in his journey down the rivers Lachlan and Macquarie, nor Captain Sturt in descending the latter river, kept the general direction of ranges sufficiently in view. In exploring the course of any river under common circumstances, and especially the courses of rivers subject to inundation, that bank is preferable which affords the readiest access to high land. The right bank of the Lachlan was, for every reason, preferable to the left: it was immediately adjacent to high land, which lay between two rivers equally the objects of research, and extended

towards the interior much farther than Mr. Oxley ever ascertained. By crossing to the left bank, and losing sight of this range, the consequences were, 1st, That he mistook the Lachlan, on regaining that river at a lower point, for the Macquarie. 2nd, That he missed the "Goobang," an important tributary, and came to the erroneous conclusion that the Lachlan did not receive a single stream throughout its long course; nevertheless, that high ground, properly explored, might have proved the key to all that has since been discovered, and was most accessible during the wettest season. Lest further illustration be necessary to show the advantage of exploring the higher rather than the lower parts of a country, I venture to add Mr. Oxley's concluding description of the region in which, by exploring on the principle recommended, I have since found Australia Felix, a territory in every respect fit for the growth of an additional nation of men. "We had demonstrated," says Mr. Oxley, "beyond a doubt, that no river could fall into the sea between Cape Otway and Spencer's Gulf—at least none deriving its waters from the eastern coast; and that the country south of the parallel of  $34^{\circ}$ , and W. of the meridian  $147^{\circ} 30'$  E., was uninhabitable and useless for all the purposes of civilized men."\*

In a similar manner the succeeding traveller proceeded along the right bank of the Macquarie, which, according to these principles, was by no means so promising or favourable as the left. How far the range dividing the Lachlan and Macquarie was associated with any idea of the basin of the latter river, may be learnt from the following definition of one of its northern extremities, "New Year's Range," viz., that it is "the *first* elevation in the interior of Eastern Australia to the westward of Mount Harris."† Had the sources of New Year's Creek or its basin been attended to, it could not have been considered "certain that, unless rain fell in less than three weeks, all communication with the Darling would have been cut off."‡ Neither was there any obvious necessity for contending with the marshes of the Macquarie, when it had been previously ascertained that high land extended into the interior, in a direction parallel to its left bank.

Seasons were opposed, in their greatest extremes, to my operations during my last two journeys: the country, in a direct line to the Darling, and most accessible during a rainy season, was parched with excessive drought; and then, when the party reached the richer soil and better watered country of Australia Felix, the

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\* Oxley's Journal of two Expeditions, p. 372.

† Sturt's Journal, vol. i., p. 66. ‡ Ibid., vol. i., p. 150.

heavy rains set in, which rendered that soil almost impassable. The aborigines, always most hostile when most numerous, had been united by the droughts at points where collision was unavoidable. These are facts which no man can deny, and they are stated here chiefly in support of the system adopted, which, even under circumstances so adverse, has been attended with useful results.

The present state of Australian geography amounts to a knowledge of all the country east of the Darling; and it is important to consider how this knowledge may be extended with the greatest advantage and least risk of the loss of either the lives or the time of individuals, by generous efforts misapplied.

The leading ranges whose western terminations have been ascertained are the following:—

1. The Grampians of the South, between the Glenelg and the Murray.
2. The range of Mount Granard, between the Lachlan and the Macquarie.
3. The Warrabangle range, between the Macquarie and the Nammoy or Peel.
4. The Lindesay or Hardwick range, between the Peel and the Gwydir.

It will appear, on reference to the map, that in order to intercept the next high land branching westward from the coast ranges, beyond the Gwydir and the Karaula, or Darling, the line of route traced by me in 1831 might be available for this purpose as far as the banks of the Karaula. The trees have been marked throughout that line, and those persons who best understand exploring will, perhaps, appreciate the most, the facilities afforded by a line of marked trees. This was carefully picked out for wheel-carriages, and leading through the region immediately behind the coast-ranges, where grass and water are both abundant, the cattle destined for an interior journey might arrive at that advanced point in good condition.

For the reasons already stated, the primary feature beyond the Karaula appears to be the most important object of research, and would probably afford the most certain line of exploration westward, whether under a superabundance or scarcity of water.

The probability of finding there a range of heights continuous westward is by no means diminished, by what I saw beyond the Darling, where ranges parallel to that river appeared to fall to the south. The sandstone strata of which they consisted, however, did dip to the north-west, even beyond the river, a circumstance certainly rather against the prospect of finding high central land. In this view of the question, it seems not improbable, considering the general course of the Darling, that another river,

parallel thereto, may conduct the waters of the northern portion of the coast range to the vicinity of Streaky Bay on the south coast, where indications of some large fresh-water outlet were noticed both by Baudin and Flinders. Were this prospect more certain, such a river might, indeed, be intercepted by exploring from beyond Fort Bourke; but from what I learnt from the natives in the interior, the first great river beyond the Darling is visited by natives from the Macquarie, *by proceeding northward*. I found, that contrary to the opinions entertained by some, of their limited knowledge, the aborigines of some parts are in the habit of setting out, occasionally, on distant expeditions, in order to surprise and carry off females; and that such predatory excursions sometimes extend from the Macquarie to far beyond the Karaula, where they reach the banks of a *river larger than the Murray*, named by them the "*Wallaspleyn*." It is not improbable that the bushranger's story had been founded on reports, which he might have heard amongst the natives, of the existence of such a river. At all events, the waters from the northern coast range must flow somewhere, and the most certain line of exploration for the solution of this question appears to be in prolongation of that marked by me in 1831 to the banks of the Karaula.

The difficulties which attend travelling in the interior of Australia arise chiefly from—1st, The necessity for carrying all provisions, tents, bedding, &c. required; 2nd, The scarcity of water; and, 3rd, The mischievous disposition of the savage tribes.

A stock of provisions calculated to last several months burthens the traveller with a load, which is sometimes very inconvenient when rivers or rugged ranges are to be crossed. This impediment we were enabled to diminish very much on the last journey, by taking live sheep instead of salted meat; and we found that after a little time the sheep required but little care, and that they even fattened on the journey.

The difficulty of finding water may be, in a great degree, avoided, by awaiting a proper time for setting out on journeys to the interior. This would be when saturating rains had fallen, and filled the hollows of the surface; after which water may be found, even on the plains, where certain inequalities on a surface of clay may retain it for several months. Seasons of flood or of drought are so extremely irregular in Australia, that some caution is necessary as to the period of setting out. Extremes of many years duration were obvious in the interior, where the growth of trees, full six inches in diameter, in the beds of lagoons, had not been interrupted, until the influx of water, by some change of season, had at length killed them; such dead trees having been seen also

standing as they had grown, in the very channels of streams. On the other hand, the long duration of excessive floods was evinced by the large fresh-water muscles of the *unio* genus, and weighing as much as three ounces and a half, which were seen projecting where they had grown, in a surface which had once been mud, but which, when crossed by the drays of the expedition, was covered with the turf of two years' grass.

When water happens to be generally distributed over the surface, the difficulties arising from the third source, which certainly is not the least impediment to the survey of these regions, viz., the savage disposition of the natives, are not so much to be apprehended. To approach *suddenly* a single strange native is at all times dangerous, for he will at all hazards attack the stranger. Several instances of this occurred in Mr. Oxley's journeys, and strangers of the aboriginal race are equally liable to such danger, and are particularly cautious in their approach, especially wherever water is to be found. Besides the above-mentioned danger, apparently the consequence of desperate fear, a lurking desire to take the lives of intruders, and by the most treacherous means, seems to be but too generally characteristic of these aborigines, especially when they have never before seen white men. The murder of two on the first expedition, and of Mr. Cunningham on the second, are instances of this; and the same unfortunate propensity has been still more recently made manifest by the dreadful fate of Captain Frazer and his shipwrecked people. No demonstrations of kindness, nor gifts presented, will deter these savages from making attempts to approach a camp at night for such bloody purposes, if they see they can do so without danger. Good watch-dogs afford some security. Others have been unfortunately obliged to fire upon them in the dark;\* but we avoided the painful necessity for doing this, and anticipated such night attacks by a sudden display of rockets and blue lights, which had the effect of dispersing any parties known to be so approaching under cover of night; while the sudden and ridiculous bustle of men dressed in masks of animals' faces glaring with liquid phosphorus, firing in the air, and shouting, to the no small consternation of the savages, afforded considerable amusement during dreary winter nights, in such solitudes, to the men of the party.

Those natives who accompanied the expedition deserved the highest praise; they were intelligent, faithful, devotedly attached to the leader thereof, and extremely useful. However difficult it may be to conciliate the aborigines on the first approach of men of a race so different from themselves, and of whose *power*, and of whose *purpose*, they are quite ignorant, it

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\* Sturt's *Two Expeditions*, vol. ii. pp. 208 and 211.



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## A U S T R A L I A























is not less pleasing to observe, than it must be gratifying to the philanthropist to learn, that when they are once made acquainted with both, and have also become sensible of the universal protection afforded by British humanity and British laws, they undergo so great a moral alteration, that too much pains cannot be taken to bring about so desirable a change, or to protect those children of the soil from the acts of violence and injustice to which they may be exposed in the midst of a convict population.

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XXII.—*Diary of an Ascent of the River Corentyn in British Guayana, in October, 1836.* By Robert H. Schomburgk, Esq.,  
Corr. Mem. R. G. S. Read February 13th, 1837.

HAVING, during the season of 1835-6, explored the river Esse-  
quibo into  $3\frac{1}{4}^{\circ}$  N., and the river Rupununy into  $2\frac{1}{2}^{\circ}$  north latitude,  
it seemed desirable to make choice of some other of the great  
rivers of Guayana; with the hope that by pursuing the stream  
towards its source, we might be enabled to penetrate into the  
interior towards the Sierra Acaray; and also might at the same  
time investigate the capabilities of the adjacent country for sup-  
plying the demands of an increasing colony. In accordance,  
therefore, with a plan laid before his Excellency Sir J. Carmi-  
chael Smyth, the river Corentyn was selected for this purpose.  
The little knowledge which the colonists had of this river, and  
the reports of those who had visited its lower regions occasionally,  
and painted its fitness for colonization in very favourable colours,  
made a further examination appear necessary. In order to be  
able to dedicate my attention uninterruptedly to the chief object  
of the expedition, I engaged Mr. Vieth as ornithologist, and Mr.  
Heraut, who accompanied me during my former expedition, as  
draughtsman; in addition to which Lieutenant Losack, of the  
69th Regiment, and Messrs. Cameron and Reiss, offered to  
accompany me as volunteers.

*September 2, 1836.* We quitted Demerara for Berbice: so  
little is the navigation of the Corentyn known, that I found it  
impossible to get a conveyance direct for that river. I was there-  
fore obliged to charter a schooner in Berbice to convey us to  
Plantation Skeldon, on the western bank of the river Corentyn,  
where we arrived on the 9th September, and were received with  
every kindness and hospitality by the proprietor, Mr. Ross.  
According to the arrangements I had made with the Post-holder,  
Mr. de Wolff, I expected to find a sufficient number of Indians at  
the plantation Mary's-hope to convey me to the Post. Mary's-